

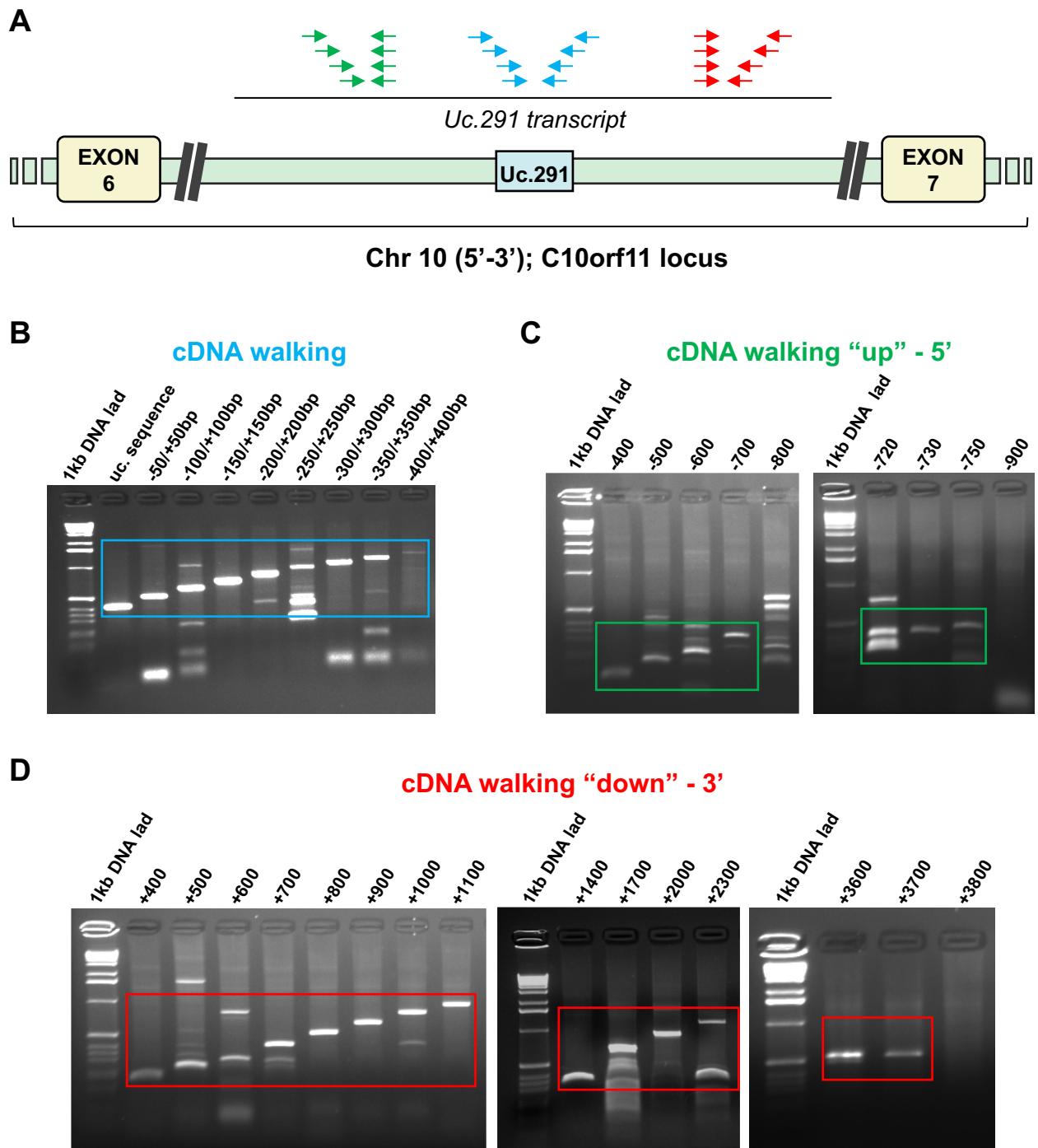
## **Appendix for:**

### **The long noncoding RNA uc.291 controls epithelial differentiation by interfering with ACTL6A/BAF complex**

Emanuele Panatta, Anna Maria Lena, Mara Mancini, Artem Smirnov, Alberto Marini, Riccardo Delli Ponti, Teresa Botta-Orfila, Gian Gaetano Tartaglia, Alessandro Mauriello, Xinna Zhang, George A Calin, Gerry Melino and Eleonora Candi

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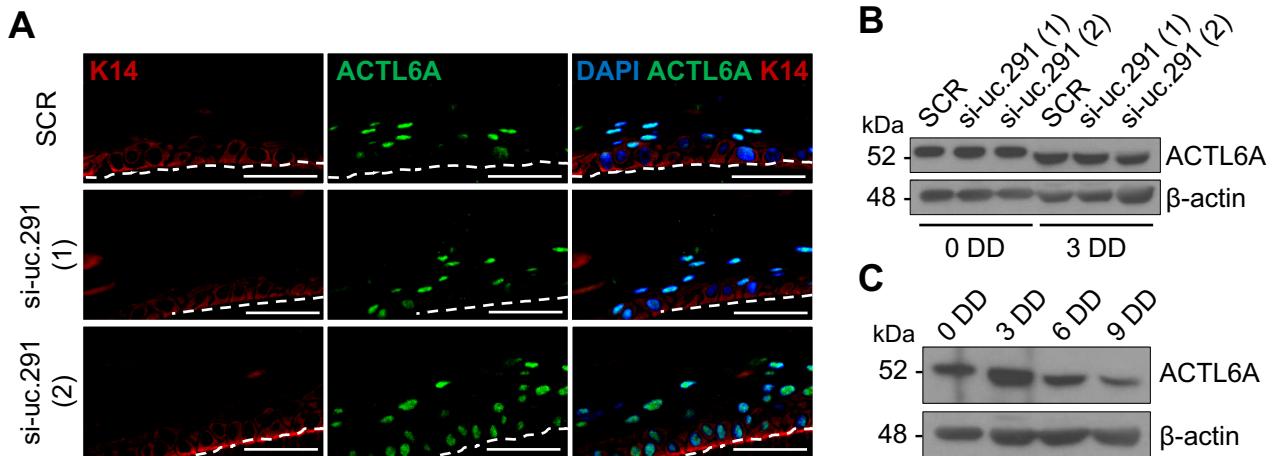
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**Appendix Figure S1. Characterization of uc.291 transcript by complementary DNA (cDNA) “walking”.** By using a multiple primers amplification approach we defined the length of uc.291 transcript. Primers were designed on 3' and 5' side of uc.291 conserved sequence at specific distances. “0 bp” represents the amplification of the genomic reported uc.291 length (424 bp in UCNEbase). **(A)** Scheme of the walking approach; **(B)** PCR fragments obtained using the blue primers reported in (A); **(C)** PCR fragments obtained using the green primers reported in (a); **(D)** PCR fragments obtained using the red primers reported in (A).

5' CTGGGCACCTAGCTCTCCACTTAAATTATTCATCCTTATGAAGAAAAATTCCCCGTGTGCTTATTGTCCTCCAGC  
 CCCGACCTGAGCTCACGCAGACTCTTCTTCCCTCCCCAAGTGGCTTGTGTGCAAGGGTTTCACTGGGTG  
 CTTATTCATTTATGCCCTTAGTATGCATTGTGTTCTGCCAAGGGGTCAAGGAGGCACATGGAGAACCCAGATGGCT  
 TACCTCTTCCCTCAGGAAACACGCCGCTATTAGCTGGCACCTCCAACTCAAGGCGGGTGAGATTCACTGTTGA  
 GAGAGAGTTGGTTCAAATGCCACTGCCCTGAGATCACAGCTCAAGTTCTCTAGGCTATGCACTTTCTACTTCTG  
 CCACCTTGCTGGAGTTTCTGCCAGAACACGCCCTTTAGGAGATATTAGAAAGGGGGTGGGAAGGGAGGGATGGAAAAA  
 GCAACTCTTGTATTATGGCTCGTCAAGGCACAAGTTCTGTTATTAACTCCGGCTGAAATAAGAAACCATAATCC  
 ATGGATGAAAAGATGGGGACAAACTCAGTAAATCTTGGAGCACCCCTGAGGATGTGTGTTTCCCTATTCTGGTTT  
 GACGTTCCCTCCCTGCTGCCATTCCAACCTTAACTTGAAAAGCCAAGCAGTTGGCTGCCAGGCCAGGGAACTT  
 ATTGTAATGCCAGCACAAATTCAAGAATCTGCTCAGCCTGTGCCAGTGAAAATGGCCTGCAATTCTGATAGGCCA  
 TGTTGTTGTAAGAATAAAATGGCTAATGAATTACAGATGAACATTGACGCCAAATTAACTCTTCCGCTGCCCTGGGTAT  
 ATGGCAGCCATTAAAAGTTAATCAATACACTAAAGTGTGAAAACATGCCAGGCACTGCCAGTTGGATGTAATAAACAA  
 TCAGAGGGAACCGGGAGGTTGCCACCCAGTCCATGTATCATGACAGGTATTATGTTAATGGACTAAATTTTT  
 ATTGGAAGGGAGCAAATGTCAGCTTAACCTTGTGAGGCCGATTCAACCTTCTTGTGAGGTTGGTGAAGAGCAGGCTGAC  
 GTGTCATTGAAATGAAATGTTAAGGGAGAAAAAGCACAACGGAGACAAAGCAGGATGGGAGCGTTGGAGACGTG  
 GTGCAGCGCTTACATTCTGCAGCAATTCAACGAAAACGTAACACTCTGATATTCTAATGTTGCTGAAAATGGTTA  
 CTAGGAACAACCTTAATGGTTATTAGTGAACAAAGTACCCAGATCTGCCAGATATCCTTTCACTGCAAGGTTT  
 GAAAACCTTTTACCAAGTCATATTGCTGGAGATTATAATTAGTCTTTCTTAATGTGAGAAGTGGAGGAGAACAG  
 CGTGATGGCTCTCAGCTCTGTATTCCATAGATCTTCTTTGAACGGTGTCAATGACTTCGAATAACCATGTTCT  
 CTTTGTGAAACTTATCTTAACTTCAAGTCATATTGTACCTCTGCCGTGAGTCTGGAGGACCAGGGAGC  
 TAAAAGAGAAAGGAAATTGCCAGTGGCAGTGCATCTCGCTGGACAAAAACAGGCTGAGACACAGGAGAGCAATGGCTC  
 ACTTGAACAGAAAATACAGACCTAGTTCAGCTTTCACTTTCTCCACATATAAAACTAAATATGTCAGTG  
 GAGCATGGGTCTTAGAAAATAACACACACTTATAAAAATAATTAGAAACGTTTAGACAAAGGATATGTTTAA  
 TGTCCTCTGCAACCAATTGTCCTCAGGTCTCTCAGTGTGAGGGCACATTCAATGGCAGGGCTTGAAGAAAATTA  
 TTCAGTAGATAGCAAGATGAGGCTGAGGATGAGAAAAGGGACAGGGGTTGTGATACTTATCCAGTGTCAAGATCTG  
 AAAGATATGAATTGCACCTTTATGTTAAATAATTGTTAAATCACAAGAATTGTTCTAATGGCTAAAG  
 TTTCATAGGTAATCAGTATTATGTAACATAAAATTAGTAAACACAAACTGATGGGTTCACTGGCTCTTCATCCCTAA  
 GCAAAATGGGAGAAAACCTCTGTTATGAAAACCGAAGCATGGCTACTGTTAACCATGATGACATCTCACCCACTACTG  
 CTCCTGAAGTCCTAAACTCTATTCTCTACCTCTTCTACCCCTTAGAGGATTGAGTCCTTACCTGTTCT  
 CTTTGTGTTCCGCGTGTGAATATAAGCTCCACAGTAGGGGGTAGGGAGCAAGAACCTGATTTCTCTCT  
 TGTCCTGGGCGCTGCCCTATAATAGGTTCTGAAATGGCAGGTAAAGTGAATGCCGACTACCTCTTATGGTCTT  
 TAATTTATAACTCCGGCTATTTTTGTTAGTCAGTATGATTCTAGTCAGTGTGTTACATATAACAA  
 TACTTGATCTTAGTGTAACTCTAGAAGATAAGAGTTATTATCTTCATTTATAGGCCAAAAGTGTCAAGAGAA  
 TTGAAGCTAATTATGTTACTGTTAGTATGTAAGCAATTCCAGAATTGAACTCTGACCTGTTGCTCTGTATCAG  
 CTATACAGTACTCCCCAATTCTGTCACTCATCTGCTCCCTGGGATTAAATCTCATTAAGTGCACCAACATTAAT  
 TCTAGACTATAACCAAGCCAGCTCCCAACTGGCTGATAATGAACAGAACTTAACTGCAACCTAAACCTG  
 GTGTCCTGAGTCCTACCTATAGAAAGCAATTGACTGTACAAAGTAGCACATTGCTATTGATGATGGGTGATATG  
 TCACTCAAATATGTTCTGTTCTGAGGAAATACAAGGAACCTCTCAAATCATGAGAAAAGTGTCAAGCAACAGA  
 AATCTAACAAATAGTGAACATGCAAGGCATTAAATTCTCACTCAGAAAGTGAACATGGAGGTAGGCAGGCCAGGAC  
 AGTGTAGTGGCTGAAAGAGCAGATCAGTAGGCACCCAGGTCTTCTGCTCTGCTACTACCTTTGAGTCATG  
 CATTTCAGCCTATGGTCTCAAATGGTTGCTACTGCTCTGGCATATTCTCAACCAAAGCAAGATGAAGAAGGATG  
 TCTTCTCTTATGAGGCATTGCTTTCATTTGTTAGACAGCTTCTCAAAGATGTCCTTCTCATTACCCAG  
 ATCATGTCATTGGGAGGCTGGAAAGTCAAATGTTCAGTTTCTGTTAGTGTGTTAGAGGAAAGGAGGAGGAG  
 CCAATGCATAGTGTCTCTATGTAAGATAATGCAATTGTTGTTACCTTAATAAAAGACTTGAACACTTGT  
 TATGCACATCAACTTATATCATGTTACACCACCTGTTACAGAAAGATTTATTCCATTACACTAAGAAGGGTGA  
 TCTCATTGTTCAATTCCCACCTATGAGTGAGAATATGCCGTGTTGAAAGGGAAATATCACACTCTGGGACTGTTGGG  
 GTGGGGGGAGGGGGAGGGGATAGATTGGGAGGATACCTTAATGCTAGATGACGAGTTAGTGGGTGCAGGCCACCAGCATG  
 GCACATGTATACTATGTAACCTGCACAATGTCACGTGACCTTAAACGTAAG 3'

**Appendix Figure S2. Uc.291 transcript sequence.** Uc.291 complete sequence (3816nt) characterized by cDNA walking followed by sequencing of the PCR fragments obtained. Ultraconserved sequence is in red, predicted ACTL6A binding sequence is in light blue.



**Appendix Figure S3. ACTL6A expression during keratinocyte differentiation.** (A) IF staining of K14 (basal layer marker) and ACTL6A in uc.291-depleted, si-uc.291(1) and si-uc.291(2), organotypic human epidermis compared to scramble control (SCR). Bar: 25um. One representative experiment of three is shown. (B) Immunoblot showing ACTL6A protein levels in HEKn cells transfected with scramble sequence (SCR) or si-uc.291(1) and si-uc.291(2) oligos and collected at proliferating (0 day) or differentiating (3 days of differentiation, DD) conditions. β-actin was used as loading control. (C) Immunoblot showing ACTL6A protein levels in HEKn cells collected in proliferating (0 day) or differentiating (3, 6, 9 days of differentiation, DD) conditions. β-actin was used as loading control.

Probe for T-UCR	Fold-change	Parametric p-value	FDR	Description
uc.262	6.9380217	5.00E-07	0.0005516	CAGGCTGAGTACAAATTACTATGCAAGGGAGGTGAGGGT
uc.283	3.9902288	0.003973	0.0439591	CAGGGGCGGGGATTGGATCAAATCACATAAAACTGC
uc.145A	3.4355936	0.0025296	0.0367763	TCCCATCCACGCCCTCATACATATTGATTCTGACACCA
uc.36	2.935153	0.0042701	0.0455497	ACTTCCCTGTGCTTGCACTATAGTTGGGACTGACA
uc.88	2.6496588	0.0053214	0.0514358	GGAGGGAAAGCAGAACGTCGGGAAGAAAAGAGAAAAGCAGCA
uc.231	2.4696586	0.0142377	0.0922464	TGTGCATGTCAGCAGAATTCTAAGAACTTACAAAATCTT
uc.291A	2.3985146	0.0144979	0.0932284	TGCCATATAACCCAGGGACAGCGGGAAAGATTAATTGCGT
uc.473A	2.2716886	0.0023525	0.035347	CAGACACGGGGAGACACAACAGCACAGAACAGAGAACAAA
uc.220	2.1861354	0.0191878	0.1134554	TCAAGATTGCCAAACCAACTAACCGATGTATCATTTGCA
uc.339	2.1658364	0.0007872	0.0230286	ACAGGAATGTAATTTCGCCGGATGAGGCCCGAGTTAA
uc.77A	1.9122857	0.0158713	0.0992502	TCTTGGGAGCAGTGTGACAGAACAGAGTGTGGCGAGAAC
uc.117A	1.8411175	0.0018504	0.0321861	AAACTGTTTATTAAGATGGGCTGGAGGCCTGGTGTGCA
uc.170	1.661361	0.0060615	0.0552691	ACACAGGAACAAAGCAAGAGAACAGAAACTCAGAGGCAGA
uc.346	1.6574337	0.0007029	0.0218725	TTCGGAGGGCGCTTTCTATTCAAAACAGGCCACATG
uc.142A	1.6263274	0.0016429	0.0308253	GTCACACCCGAACCGCCAACAAAATTATCTAACGCTGCCA
uc.388A	1.5296091	0.0099989	0.0733348	AGCAACACACCATTTCACAGTCTATGGGCACAAACACAT
uc.20A	1.4471174	0.0436931	0.2063864	CTTGGTGAGGTTGGGCGGATAAAGAAAGGTGTTGGTGG
uc.110	1.4082587	0.0031046	0.0398286	ACAAGTTGCTGTTAATTAGTGCAGGGAGGACGGGATGGA
uc.398A	1.3920305	0.0497388	0.2267608	GGATCGGGAGGAGAGGCCAGCGACCACAAAGAACAG
uc.478	1.3431458	0.0239285	0.1326632	AAACAAATGGTGGTACGACAAAGGAGAGTGCAGGGAGCGGG
uc.217A	1.276802	0.021647	0.1232889	AAAGCACCCCTCACAAAGCCACAAACAAGAACAGCAGGACAG
uc.208A	1.2115439	0.0348729	0.1738692	TCAATGAAGAATGAAGAGAACAGTAGAAAGCAAGAGTGAAGT
uc.310A	0.65047	0.0210915	0.1214111	GGCCTGTCTCTCTCTTCAACCAAATTCTGCTT
uc.369	0.6353444	0.0467179	0.2170893	TGATCTCATATTAAATTTCCTGAAATCCGCCCTGGC
uc.198	0.6342153	0.0182638	0.1091729	CTGGTGACAAGTGAAATTGCTGTGCGCCTCATTTAGCTGT
uc.262A	0.6117229	0.0442415	0.2085941	ACCCCTCAGCCCTCCCTGCACTGATTAATTGACTCAGCTG
uc.16	0.6081178	0.0409966	0.1964124	CTTGTCAACACAGAGCTAGAAACCCCTCTCCACTCCC
uc.478A	0.5942682	0.0280721	0.1492947	CCCGCTGCCGACTCTCTTGTGTAACCACATTGTT
uc.352	0.5837183	0.0263843	0.1424184	TTAAAGGCCAGTCTAAATAGATTGCAACCCAGCCCC
uc.242	0.5766099	0.0308061	0.1585047	TTTAGTAGTCGCTATTCTGCTAACATGTGGCACCGT
uc.138	0.5757989	0.0400969	0.1932085	CTGACTTCTTCATCTCCCCACTTCACACAAATTGCTCA
uc.28	0.5717847	0.0282912	0.149858	AACTATATACCAAGGCCCTGCTGAAACACCAACAGT
uc.462	0.5621613	0.0064514	0.0572034	GGTGGGTGGAGAGACGAAGTCAGGGCTGTTGTAAT
uc.452	0.5604607	0.0385909	0.1877993	AGCGTGTCTTAATGCTATTCACTGCCCTTGATGATTGA
uc.346A	0.5596938	0.0026415	0.0374468	CATTGTGGGCTGTGTTGAATAAGAAAAGCCGCCCTCGAA
uc.325	0.5579312	0.0104034	0.0750892	GGGGTTTGTGTCAGAGTAGTCCGCCCTCATGTTTGT
uc.151A	0.5475617	0.0166494	0.1023798	TCTTGCTCACCTGGTCAAACACCCATTCTCACTGCTT
uc.390	0.5450069	0.0322261	0.1638461	AATTAGTCATTACTGTTCTAGCCTGCAAGCTCTGGG
uc.396	0.5407496	0.0161342	0.1001554	CATTTGCAACAGCTGCCAACTGATTAATCCTCACAA
uc.77	0.5379875	0.0382952	0.1867631	GTTCCTGCCAACACTCTGTTCTGTCACACTGCTCCCAGA
uc.412A	0.5237442	0.031904	0.1631937	TTCAAATCCACACAAGCCTGCCACTGCACTGTCATTCCC
uc.21A	0.5211857	0.0325936	0.1651708	ACCCATAATTCTCATTTCCAAACCTCACACATGCTGAA
uc.465A	0.5019852	0.0026524	0.0374468	TTCTCTCATCTCCCGCAGCTTAGCACCTGCTTGTGTTGG
uc.400A	0.497497	0.0270436	0.1454441	AATCATCTGACACAAAGATAATTGAGCCAGGCCCTGCCAC
uc.457	0.496534	0.0180181	0.1085937	AGACATATTCCAGATCACAACCTCCAGAACCTGCCCT
uc.268	0.4928927	0.0027834	0.0383176	ACTATCATCACAAACCTCATTGTTCCATCTCTGCCCTCCC
uc.129	0.4880591	0.0251525	0.1374754	CCATTGCCATCATGTGCTCGCTGCCGTCTAACATAGACTC
uc.223A	0.4698592	0.0008607	0.0242558	GGCTGATTATGTTGTCATTCCCTCTCACAGCTCTGCAT
uc.373A	0.46421	0.0193354	0.1138975	TTGAAAGGAGACAACATTGTCGGATTTCCACTGCGACA
uc.473	0.4634708	0.0022747	0.03482	TTTGTCTCTGTTCTGCTGTTGTCCTCCCGTGTG
uc.133A	0.4487399	0.0259639	0.1407152	ACTTCCGATTTAATTCTCATGCCCTGACATCCACA
uc.476A	0.4466684	0.0276283	0.1476632	GCTGATTGATGGCTCTCCCTCACTGCTGAAGGCTGTAT
uc.422	0.4430617	0.0099478	0.0730988	GAGATTCTGCATTACTACACCTCAGTGCCTGCCCTGGTTCC
uc.250	0.4364047	0.0070389	0.0603978	GCAAATATGATTATACACTATCAAACCTGGCACCAACAGGC
uc.10A	0.4228508	0.0180147	0.1085937	TCTGCATCTCTTAATGGCCTCTGCTCCCTACACTCAATT

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uc.335A	0.4227937	0.0146008	0.0936515	CAGCAGAAGCAGGTCTAGTCCCAGGGTTAATGTAGTG
uc.281A	0.4197648	0.0082006	0.0648906	GCCTTATTGAAATTGAAACCTCTGCCTCCCTGGCT
uc.391A	0.4037248	0.0289005	0.1520426	AAATTATTGATGGCTGGCAATTGTGGGATGTGTT
uc.305A	0.3992737	0.0028265	0.0385672	CGGCAGGCTTCCCATCTCCATCCATTATCATCTCG
uc.161A	0.3980419	0.0007734	0.0228909	CCATCATATAATTGTCATTGGTGCCTCACGCCAGCT
uc.177A	0.3960284	0.048816	0.224542	CACAATTCAAACACTGCTGCTAATTCCACCCACCTGTCA
uc.159A	0.3946312	0.0031571	0.0401024	GGTCCTCCACAGTCCCAAATTACCCGTTAACGCCATAAT
uc.416A	0.3747073	0.0023867	0.0355154	GCTGCCATGCACACCGGCTTACGGCTACAATTACAATG
uc.134A	0.3737976	0.0088282	0.0679086	GCTCATAAATTACTGCTTTGTTGCTGGCTGGCTTGT
uc.1	0.3736053	0.0064382	0.0571786	CACTCCCCACCGCAGGGCTTGCTGAGCAGTTAGTATC
uc.181A	0.3669021	0.0016712	0.0308772	GAATGAGCAGGCCCAAGGTGTTCAACTGGAGTGTGTT
uc.349	0.3633513	0.003553	0.0415567	ATGTTTCCACAGGCCAAGACCTTGGTGCATGCTTGA
uc.266A	0.3471284	0.0207761	0.1199206	AGACCACTCAATTCAAGCTCTGCCAGCCTCGTTGAGA
uc.136	0.3449797	0.0143047	0.0925777	CAATAACGCTTGATAGATCCCTGTCGCCGGTGTGTTGA
uc.411	0.3341136	0.0003292	0.0146432	ACCCATTGTCACCCAGCATTCCCTTGTGTATAGAACAA
uc.164A	0.3221855	0.0045111	0.0470165	TTACACATGCTGTCAGTTAGCTCAGCCAGGTCTTGT
uc.329A	0.2860004	0.0025932	0.0370876	TGTAGTCATCAAGTGAGAAAGACATCCCTCCTGGCTGC
uc.232	0.2818089	0.0006993	0.0218725	AAGTGTGTCATAAACGAGCCAAGATCTGCCAACATCG
uc.63A	0.2714599	0.0012258	0.0280916	CAGTGTGCTGTTGCTGCTGGTAATTGCTTTGCTT
uc.257	0.2624234	0.0002364	0.0124403	CTGATGGATTCCCAGGCCATTGCTGACTGTGAAACTA
uc.338A	0.2565722	0.0010626	0.026549	CTGCGCTGCCGTGCTGTACCTGCTGTGGATAAATAG
uc.183A	0.250974	6.32e-05	0.0068978	CCCAGTGTAGATGTCAGGTGCTCTTCTTCTTCTTG
uc.252A	0.2239623	0.0002429	0.01259	TCTCAGGAAGGCCAGCCAATTAGGACTTGACCATTGAA
uc.204A	0.1862553	2.7e-06	0.001604	GCTCTAATTACAAGGCCCTGCCTAATGAATTGTCGGG

**Appendix Table S1. Modulated T-UCRs during keratinocytes differentiation**

**Description:**

Number of classes: 2

Type of univariate test used: Two-sample T-test

Nominal significance level of each univariate test: 0.05

**Summary of Results**

Sorted by p-value of the univariate test.

Class 1: differentiated; Class 2: undifferentiated.

The genes are significant at the nominal 0.05 level of the univariate test

Gene Symbol	Expressed in epidermis*
<i>BATF2</i>	yes
<i>SMARCE1</i>	yes
<i>ACTL6A</i>	yes
<i>TRIM16</i>	yes
<i>TADA2A</i>	
<i>CENPO</i>	
<i>DEK</i>	yes
<i>CRTC2</i>	yes
<i>UBE2B</i>	
<i>BRCC3</i>	
<i>CHCHD3</i>	
<i>SETMAR</i>	
<i>CHD2</i>	
<i>SMARCC2</i>	yes
<i>VEGFA</i>	yes
<i>PRMT3</i>	yes
<i>C17orf49</i>	yes
<i>GATA2</i>	
<i>MRGBP</i>	
<i>BMI1</i>	yes
<i>CPA4</i>	yes
<i>PRMT6</i>	yes
<i>CHCHD2</i>	yes
<i>DCAF17</i>	
<i>SMARCD3</i>	
<i>SETDB1</i>	
<i>EYA1</i>	
<i>UBE2U</i>	
<i>ZCRB1</i>	
<i>GATA3</i>	yes
<i>EPC1</i>	
<i>PRKD2</i>	yes
<i>ATXN7L3</i>	yes
<i>HJURP</i>	
<i>CENPA</i>	yes
<i>SIRT1</i>	
<i>PRKCA</i>	
<i>HIST1H1C</i>	yes
<i>ZNF451</i>	
<i>PHLDB1</i>	yes

**Appendix Table S2. List of ranked candidates interacting with uc.291.**

Table showing the top 40 uc.291 interactors derived from the protoarray. See also Figure 4 and Figure EV4. \* The expression in human epidermis was extrapolated from *The Human Protein Atlas* (<http://www.proteinatlas.org>).

cDNA Walking	
Name	Sequence 5'-3'
F-50	TTCCCAACTTAACTTTGAAAAGC
R+475	AAACGGCTCCCACATCCTCGCTTG
F-100	ATGTGTGTTTCCCTATTCTGG
R+525	CGTTTCGTTAATGAATTGCTGCAG
F-150	GGATGAAAAGATGGTGGACAAAC
R+575	AGTTGTTCTAGTAAACCATTTCAC
F-200	CACAAGTTCTGTTATTAAATCCG
R+625	AAAGGATATCTGGCAGATCTGGG
F-250	AGGGAGGGATGGGAAAAAGCAAC
R+675	TCCAGCAAATATGACCTGGTAAAG
F-300	GTTTCTGCCAGAACAGCCTTTAG
R+725	GCTGTTCTCCTCCACTTCTCAC
F-350	CCAAGTTCTCTAGGCTATGCAC
R+775	CACCGTTAAAAGGAAAGATCTATG
F-400	CTGTTGGAGAGAGAGTTGGTTC
R+825	AAGATATAAGTATTCCAAAAGAGAAC
cDNA Walking UP	
Name	Sequence 5'-3'
R5'-UP	GGCTGTTCTGGCAGAAAACCTCC
F-456	CGCCGCTATTAGCTGGGCACC
F-505	GGAGGGCACATGGAGAACCCAG
F-620	CAGACTCTCCTCTTTCCCTC
F-647	GTCCTCCAGCCCCGACCTGAGC
F-685	CATCCTTATGAAGAAAATTCCC
F-715	CTGGGCACTTAGCTCTCCAC
F-732	AACTACAGTGAGGCCTGGGCAC
F-861	GAGTTGCTGCCTTGACAGCTG
cDNA Walking DOWN	
Name	Sequence 5'-3'
F3'-DOWN	CTTACCCAGGTCATATTGCTGG
R+875	TCCTTCCAGACTCACGGCAGAGG
R+923	GCGAGATGGCACTGCCACTGGC
R+1060	CTAAGACCCCATGCTCCACTGAC
R+1177	AATGTGCCCTCAGACACTGAAG
R+1288	CTTTGCAAGACTGAACACTGG
R+1440	GGGATGATGAAGGACCAATGAAC
R+1578	CTTCTAAGAGGGTAGAAAGAGG
F3'-1500-DOWN	CCCACTACTGCTCCTGAAGTCC
R+1826	CAACTAACAGAGTGACTAGAAATC
R+2118	CAGCCAGTTGGGAGCTGGCTGG
R+2400	CCTGGGCTGCCTACCTCCATTG
R+2664	CCAGCCTCCCAATGACATGATC
F3-2700-DOWN	GGATGTTTCCCTATGAGGC
R+3040	CTGGTGCCTGCACCCACTAAC
R+3100	CTTACGTTTAGGGTACACGTG
R+3200	GTCAGACCTGATAATTAGGGC

**Appendix Table S3.** Primers list used in the cDNA walking experiment (see also Appendix Figure S1).

Name	Sequence 5'-3'
T-UC291 FW	GCGTCAATGTTCATCTGTAATT
T-UC291 REV	CTGTTCTCAGCCTGTGCCGAG
T-UC183 FW	TGCTTCTCTCTCCCTTCCTTTTG
T-UC183 REV	TGCTCTCTACCAGGTTGGCG
T-UC257 FW	GCTGATGGATCCCAGGCCATTG
T-UC257 REV	GTTCTGATCTTGAGGTAATTAGCC
T-UC338 FW	AGTGAGCCTGGAGACTGAAACATCC
T-UC338 REV	ACAGCCCTGGAGACTGAAATCCTC
T-UC63 FW	CAGTGTGCTGCTGTTGCTTGC
T-UC63 REV	CCTGTTGCTTCTTCTGTTCTC
T-UC36 FW	AAATGTGTTGAGTGCAAGCAG
T-UC36 REV	GGGTCAATTACCGCATGAAGGCC
T-UC88 FW	TGTCAAAACTGCCAGGAGCAAG
T-UC88 REV	GCCAATCTGTCACCGTTCA
IVL FW	CAGGTCCAAGACATTCAACC
IVL REV	CAAGTTCACAGATGAGACGG
KRT10 FW	AGGAGGAGTGTATCCCTAAG
KRT10 REV	AAGCTGCCTCCATAACTCCC
LOR FW	CTCTGTCTGCGGCTACTCTG
LOR REV	CACGAGGTCTGAGTGACCTG
U6 FW	GTGCTCGCTTCGGCAGCACATAC
U6 REV	AAAAATGGAACGCTTCACGAATT
ACTIN FW	GTTGCTATCCAGGCTGTGC
ACTIN REV	AATGTCACGACGATTTCCC
LCE1B FW	GCTACAACACTACAAGCAGTTC
LCE1B REV	CTATTCTGCCCTTCAGCATCA
LCE1C FW	AATCCAGGACCGAAACTG
LCE1C REV	TGGACCTGTGAGCCTCTCAG
LCE2B FW	GGTTGACTAAACTCTGCCAGG
LCE2B REV	GGCACTGGGGCAGGCATT
LCE2D FW	CTGCAGAAGAGCTGGTACTG
LCE2D REV	CTCCATCAAGCACAAAGTTCTG
LCE3A FW	CTGAGTCACCACAGATGCC
LCE3A REV	CTTGCTGACCACCTCCCTG
LCE3C FW	CCAGTTGCCCTCACCAAG
LCE3C REV	CCGGAGCTTAGAGCACAGTC
LCE6A FW	CAGGGAGCTAAAAGCCAGA
LCE6A REV	GAGGGGAGCATTTGGGAACA
SPRR2B FW	AGGAACCTGGCTTGTCA
SPRR2B REV	AGCTCATGCCAGGTGAAAG
KPRP FW	CCTGAAGGACTGTTGCC
KPRP REV	CTGGGCAAAGGGGATTGAG
HRNR FW	GAAGTGCTCAGGGCAAGAT
HRNR REV	GCACCTCTGCTTGGACAT
FLG FW	CAATCAGGCACTCATCACAC
FLG REV	ACTGTTAGTGACCTGACTACC
TBP FW	TCAAACCCAGAATTGTTCTTAT
TBP REV	CCTGAATCCCTTAGAATAGGGT

**Appendix Table S4. Primers list used in the RT-qPCR**

Name	Sequence 5'-3'
LOR FW	TCTCCTTCCTGCATCGCT
LOR REV	TTCGTTGCCAGCCATTCCCT
FLG FW	CCAAGGCAAAGGGCAAGATT
FLG REV	GCTACGCTGTCTAGCTCTG
LCE1B FW	TGAAGGAGGGAGCCTCAAGA
LCE1B REV	TACAGGTGAACATGGCAGGC
TBP FW	CTGACAGGTAAGGAGGACGC
TBP REV	AGTTACCTGACCTCTCCCCC

**Appendix Table S5. Primers list used in the ChIP experiments** (see also Figure 5).